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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,852	12/19/2001	Lennart Mathe	PA738C1	8391
23696	7590	10/15/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			VO, DON NGUYEN	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,852	MATHE, LENNART	
	Examiner	Art Unit	
	DON N VO	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "said input signal by said programmable digital filter" recited at lines 3-4 lacks antecedent basis.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suominen et al (5,926,513) in view of Kroeger et al (5,404,375).

Regarding claims 1, 5 and 10, as shown in figures 1-3, Suominen teaches a receiver comprising antenna (20), mixer (100), A/D converter (200) and digital filter (300). See also column 4, lines 23-46. Suominen fails to teach a baseband processor for processing the baseband signal. However, Kroeger, as shown in figure 4, teaches baseband processor (44,64) for further processing the

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baseband signal into data. See also column 7, lines 42-57. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the receiver Suominen by incorporating the processor as taught by Kroeger so that the baseband signal can be further processed into data.

Regarding claim 6, Suominen further teaches rejecting jammer signals. See column 5, lines 31-65.

Regarding claim 7, Suominen further teaches the digital filter including sample rate converter. See column 6, lines 56-66.

Regarding claims 8 and 9, Suominen fails to explicitly teach eliminating any bias (claim 8) or adjusting gain (claim 9) of the baseband signal; however, it is well known in the art of digital filter (FIR or IIR) that the digital filter can perform such functions. See column 9, lines 19-42.

5. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suominen et al (5,926,513) in view of Kroeger et al (5,404,375) as applied to claims 1 and 5-10 above, and further in view of Kaku et al (5,694,422).

Suominen and Kroeger teach all subject matter claimed except for further arrangement of the digital filter to include FIR, IIR, and FIR connected in series. However, Kaku, as shown in figures 3, 5 and 7, teaches an arrangements of the FIR, IIR, and FIR to form a digital filter to achieve specific needs of filtering. See also column 2, lines 31-40; column 3, lines 6-45; and column 6, lines 39-48. Therefore, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to modify the digital filter of Suominen by implementing it as taught by Kaku so that the received signal can be effectively filtered or processed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference Boie et al (5,963,273) is cited because it is pertinent to the arrangement of the digital filter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N VO whose telephone number is (571) 272-3018. The examiner can normally be reached on TUE - FRI (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOHAMMAD GHAYOUR can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DON N VO
Primary Examiner
Art Unit 2631